DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002856
Date Inspected: 09-Jun-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1400
OSM Departure Time: 2300
Location: Changxing Island

CWI Name:	See below	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☐ Yes ☑ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Skin plates

Summary of Items Observed:

The name of ABF Certified Welding Inspector (CWI) are Mr. Wang Cheng Jun, Mr. Wei Jian Bo, Miss. Xie Yan and Mr. Yang Yi Heng.

Magnetic particle testing (MT) on splice welds (Tower Bay#1 Bay #2): Caltrans QAI performed QA MT testing on splice weld of longitudinal stiffener plate. The test splice weld numbered # SSD1-SA180D/E-42B (Bay#1), ESD1-SA77D/E-6A, ESD1-SA77-D/E-8, ESD1-SA77D/E-21A, ESD1-SA77D/E-11A, ESD1-SA77D/E-6 and ESD1-SA77D/E-20A (Bay#2). The grease, rust, scale and other moisture have been removed by ZPMC workers on both side 200mm of test weld areas prior MT testing. The power source of MT testing is used electromagnetic yoke with Alternating Current (AC) made by Magnaflux. The detection media is used dry red ferromagnetic particles. The QA MT testing of weld areas appeared to be in compliance with the requirements of AWS D1.5 (2002) and Caltrans contract documents.

Submerged Arc Welding (SAW) process on longitudinal stiffener plate and skin plate (Tower Bay#1 and Bay#2): Caltrans QAI observed ZPMC welding operators performed semi-automatic SAW on the splice weld of ASTM 709 345 longitudinal stiffener plate numbered P155A to P155B with 60mm wall thickness, weld# SSD1-SA16A/G-42A (Bay#1), skin plate P39 to P327A with 65mm wall thickness weld# SSD1-SA107-21B (Bay#2), skin plate P759 to P316 to P263 to P201 with 45mm to 65mm wall thickness weld# SSD1-SA17G/G-5B, SSD1-SA17 G/G-55, SSD1-SA17F/G-5B and SSD1-SA17F/G-2(Bay#1). The weld designed is a double -V-groove with welding conducted in the in flat position (1G) with proper 4.8mm diameter wire feed electrode JW3 and flux/J1-B, made by China Company and completed with approximate five pass. The parameters used for SAW welding of splice weld was conducted in accordance with Caltrans approved WPS-B-T-2221-B-U3. The

semi-automatic SAW was monitored and recorded by ZPMC QC and ABF Certified Welding Inspector (CWI). Based on Caltrans QAI observations, no discrepancies were noted.

Flux Cored Arc Welding (FCAW) welding process on longitudinal stiffener plate (Tower Bay#2): Caltrans QAI observed a welder was performing FCAW process on splice weld of longitudinal stiffener plate numbered P159A to P159B with 60mm wall thickness, weld# SSD1-SA16A/G-43A (Bay#1) and longitudinal stiffener for numbered P1028 to P326 with 60mm wall thickness, weld# ESD1-SA107-1B and ESD1-SA107-2B (Bay#2). The parameters used for FCAW process of splice welds were conducted in accordance with Caltrans approved WPS-B-T-2231-B-U3-F. The electrode being used is super cored 71.H with 0.14mm diameter made by China Company. The FCAW process was monitored and recorded by ZPMC QC Inspector and ABF CWI. Base on Caltrans observation, no discrepancies were noted.

Summary of Conversations:

As Note within the report above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Wahbeh Mazen (818)292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Pau,Wai	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer